



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA 10-002
Prompted by: RQ09-002
Date Opened: 01/14/2010
Investigator: Kyle Bowker
Approver: Frank Borris
Subject: Engine Compartment Fire

Date Closed: 02/29/2012
Reviewer: Jeff Quandt

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: MAZDA MOTOR CORP, MAZDA NORTH AMERICAN OPERATIONS, FORD MOTOR COMPANY
Products: MY2001-2004 Ford Escape and Mazda Tribute
Population: 545,700

Problem Description: Alleged non-crash fire or thermal event originating in the engine compartment at or near the anti-lock braking system (ABS) control module after the recall remedy, 07V-156 or 07V-157, had been applied.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	35	250	260**
Crashes/Fires:	32	212	221**
Injury Incidents:	0	1	1
Number of Injuries:	0	1	1
Fatality Incidents:	0	0	0
Other*:	3	38	39**

***Description of Other:** Alleged non-fire thermal event originating at or near the ABS control module.

** Count indicates duplicate reports received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This Engineering Analysis has been closed. The manufacturers have initiated Safety Recalls 12V-005 (Ford) and 12V-016 (Mazda).

Summary:

Ford and Mazda recalled model year (MY) 2001 through 2004 Ford Escape (07V-156) and Mazda Tribute (07V-157) vehicles due to non-crash fires or non-fire thermal events originating in the engine compartment at or near the ABS control module. Approximately 545,700 vehicles were subject to the initial safety recalls and approximately 424,700 vehicles were serviced under those campaigns. The campaigns addressed potentially damaged, missing or misplaced seals in the ABS control module wiring harness electrical connector that could allow brake fluid to enter the connector, possibly resulting in corrosion, short-circuit, melting, smoke and/or fire.

Since the recall, the agency is aware of 260 subject vehicles that have reportedly experienced non-crash fires or non-fire thermal events originating at or near the ABS control module in vehicles some time after being serviced under the campaign.

The post-recall repair incident rates for MY 2001 and 2002 subject vehicles are 90.9 and 126.7 (normalized per 100,000 vehicles serviced under the recall campaigns), respectively. These rates are much higher than the post-recall repair incident rate for MY 2003 and 2004 subject vehicles, which are 5.0 and 3.7 per 100K, respectively. Similarly, the post-recall repair key-off fire incident rates in the MY 2001 and 2002 subject vehicles is 54.3 per 100K, compared to 0.5 per 100K for the MY 2003 and 2004 subject vehicles. The agency is aware of 12 key-off fire incidents, all

involving MY 2001 and 2002 subject vehicles, where the vehicle was parked inside a structure when the fire started. In five of those incidents, the fire spread from the vehicle to the structure itself. Ford has identified the brake master cylinder reservoir cap in certain MY 2001 and 2002 subject vehicles as a potential source for brake fluid leaks that could affect ABS module connector integrity. The reservoir caps used on the MY 2003 and 2004 subject vehicles are reportedly an improved design from those used on the earlier models.

By letter dated January 4, 2012, Ford notified the agency that it would conduct another safety recall (identified by NTHSA Recall No. 12V-005 and Ford Recall No. 11S24) of certain MY 2001 and 2002 Ford Escape vehicles to perform a more thorough remedy to address the risk of fire originating at the ABS control module. In addition to double-checking the ABS control module wiring harness electrical connector weather seal (which should have been addressed under the previous recall campaign), Ford will replace brake master cylinder reservoir caps to address the leaking cap problem and reduce the risk of brake fluid entering the subject electrical connector. Ford will also modify the electrical system such that the ABS control module is de-energized when the ignition key is switched off to further reduce the risk of an unattended vehicle fire in units that may have sustained some small loss of connector integrity that may not be evident upon visual examination. Similarly, Mazda notified the agency by letter dated January 19, 2012, that it would also conduct a safety recall (identified by NTHSA Recall No. 12V-016 and Mazda Recall No. 6712A) of certain MY 2001 and 2002 Mazda Tribute vehicles.

Ford estimates repair parts will be available beginning the second quarter of 2012. Until recall repairs are made both Ford and Mazda are advising owners of affected vehicles to reduce the safety concern by parking their vehicles outdoors away from structures to prevent a potential fire from spreading.

Accordingly, this investigation is closed.

EA10-002 Closing Resume Attachment

The ODI reports cited above can be reviewed at www-odi.nhtsa.dot.gov/complaints under the following identification (ODI) numbers: 10194934, 10212160, 10213299, 10220010, 10230335, 10232437, 10240171, 10243376, 10246430, 10257257, 10259865, 10277019, 10277495, 10280686, 10286582, 10290029, 10294800, 10307144, 10307147, 10323428, 10330899, 10331203, 10331477, 10347114, 10356538, 10365927, 10367245, 10368704, 10371011, 10403290, 10406493, 10410093, 10272775, 10325170, 10357867, 10437232 and 10448498.